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ABSTRACT

The Highland (Indiana) public schools developed a writing program for elementary school students based on the premise that children learn to use language by actively generating language. The program features language production as the principal student activity in the English class and uses the students' own written work and oral expression as the content for language instruction. Textbooks are not used except as handbooks for directly helping students improve their own writing. During individual writing conferences, teachers provide students with feedback on both the content and the mechanics of their writing and discuss plans for future writing activities. All students are expected to produce two pieces of original writing each week with folders containing samples of children's writing serving as a cumulative record of each child's growth. Evaluations of the program over four years revealed that many students showed a significant increase in the usage of a given skill within their essays. In many cases, the absence of significant improvements was explained by the fact that the students' initial scores were very high or by the fact that a specific skill was not expected to be mastered until a subsequent grade level. The systematic feedback component was considered to be effective to the extent that significant improvements appeared when the feedback was introduced and significant decrements appeared when the feedback was withdrawn. The intensive teacher feedback model implemented in the fourth year of the program indicated that students could achieve substantially higher levels of competency when the feedback was intensified through the addition of outside evaluators reporting both to the administrators and to the teachers. (HOD)

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ACTIVE WRITING PLUS FEEDBACK: A SUCCESSFUL ELEMENTARY SCHOOL WRITING PROGRAM

by

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An effective way to teach writing strategies to elementary age children is to have students plan, write, and revise manuscripts that suit their own needs and interests. The students learn by attempting to express their own ideas and develop the motivation to learn new skills as the need for these skills arises in their own work. The importance of flexibility in such a writing program is obvious. In addition, however, it is important to introduce enough structure to see to it that important writing skills are in fact developed.

Feedback to students plays an obviously important part in such a writing program. Students are able to direct their learning activities more effectively if teachers reinforce their successful efforts and point out areas where additional practice is needed. Less obvious is the fact that the teachers themselves can benefit through objective feedback from an impartial evaluator. Just as students can direct their activities on the basis of feedback they receive from their teachers, the teachers themselves can set goals and direct their efforts more effectively if they can base their decisions on useful feedback.

This report describes a successful, cooperative effort to improve the writing skills of elementary school children in the pubic schools of Highland, Indiana. The present report outlines (1) the purposes of the program and steps in its implementation, (2) the research procedure employed to evaluate the program and the results of that research, and (3) a curriculum model which demonstrates an effective working

relationship between university and public school system personnel. More detailed information regarding the specific activities, the measurement instruments, and the results of the first three years of the program are summmarized in Delph, Vockell, & Fullenwider (1981).

The Highland Writing Program

A program for written language, The Second R, was developed in 1976 by a committee consisting of classroom teachers, principals, and the Director of Elementary Education in the Highland Schools. Faculty members from Purdue University Calumet helped evaluate the program and provided feedback to the teachers. This new program was based upon the premise that children learn to use language by actively generating language. The new program featured language production as the principal student activity in English classes. The students' own written work and oral expression became the content for language instruction. Textbooks were not used except as handbooks for directly helping students improve their own writing. Growth in fluency and ease of expression was the primary goal of the program. The mechanics of writing and transcribing skills were to be learned gradually in the process of generating written language.

The children's original writing was used by the teacher to diagnose students' writing abilities and to prescribe appropriate instructional activities. Instruction built on their language

accomplishments and followed their natural language learning processes. During individual writing conferences, teachers provided students with feedback on both the content and mechanics of their writing and discussed plans for future writing activities.

Because the Highland writing program was based upon the assumption that children learn to write by writing, the frequency of writing was vital. Daily practice was considered essential, with students getting feedback about their efforts and using this feedback to rewrite and revise their work. All students were expected to produce two pieces of original writing each week. Folders containing samples of children's writing served as a cumulative record of each child's growth in writing. Samples from the beginning, middle, and end of each school year were placed in each student's folder as part of a cumulative record kept throughout the student's school years. These folders allowed the teacher and the students to focus on trends, to note progress, and to identify areas needing improvement. They also provided a basis for planning future work for the students. Students' writing samples were passed along to the next teacher as the children moved from one grade level to another and became the basis for natural next steps in the writing process.

Implementation and Evaluation of the Program

The new program for written language was implemented in the elementary schools during the 1976-77 school year. Inservice

workshops helped the teacher implement the program in the school system's six elementary schools.

During the spring of 1978 the university professors met regularly with the Superintendent, the Director of Elementary Education, and members of the Language Arts Committee to develop a research design and to plan its implementation. They decided to evaluate quality of written expression by analyzing students' original writing for such factors as ideas, content, organization, vocabulary, and sentence structure. Instruments were developed to measure thee outcomes. (See Delph, Vockell, & Fullenwider, 1981).

The first system-wide evaluation occurred during the spring of 1978. The first year's evaluation revealed some areas of strength and some that required attention. Three categories of strengths and weaknesses were identified:

1. Areas of Extreme Strength. These indicated objectives mastered by 90 percent or more of the students at the grade levels where the curriculum objectives indicated mastery should occur for most students. There were seven instances of these.

2. Areas of Weakness. These were objectives either (a) mastered by fewer than 50 percent of the students when the skill was at the "teaching" level, or (b) mastered by fewer than 75 percent of the students when the skill

was supposed to be at the "maintenance" level. There were 19 instances of these.

3. Areas of Retrogression of Skill Development. These were objectives which reached a high degree of mastery at one grade level and then dropped at the next grade level. (For example, fourth graders did not capitalize the first word of a sentence with as much accuracy as did third graders.) There were five instances of these.

Early in the 1978-79 school year the university professors presented and interpreted their findings to school administrators, members of the Language Arts Committee, and to all elementary teachers. With each group, the overall results and the summary of strengths and weaknesses were discussed in detail. The evaluators urged full program implementation, with increases in the amount and variety of writing, in specific feedback to students, and in diagnostic-prescriptive instruction based on needs directly observed in students' writing.

A second system-wide evaluation was conducted in the spring of 1979. The evaluators presented the results of the second stage of the analysis to the Superintendent, the Director of Elementary Education, and the Chairperson of the Language Arts Committee. They recommended that the findings again be communicated to all elementary teachers and that inservice activities continue. A report that summarized the evaluation

effort and compared student progress in written expression over the two-year period was distributed to all elementary principals and teachers early in the 1979-80 year. However, no feedback-oriented workshop was provided for the teachers or staff. During the 1979-80 year teachers continued to follow the guidelines established for the writing program and to work toward program goals.

A third system-wide evaluation was conducted at the end of the 1979-80 year. These results were again presented directly to the teachers.

In addition to the percentages of mastery, the data were summarized in ways to focus on areas needing attention. The most improvement-oriented data to emerge from the study are shown in Tables 1 and 2. Since many of the same students were measured in 1978 and in 1980, it was possible to make a longitudinal comparison between the 1978 performance and the performance of the same students in 1980. In 1978, each student was rated either as (a) having "no rating" with regard to a given skill--usually because the skill was not needed in the essay; as (b) have "not mastered" the skill--by needing it and failing to implement the skill correctly; or as (c) having "mastered" the skill. Table 1 takes "capitalizing proper nouns" as an example and shows the percentages of students falling into each of these 1978 categories who mastered the skills when retested in 1980.

Insert Table 1 about here

In interpreting Table 1, it is convenient to say that students who had mastered the skill in both 1978 and 1980 had "retained" the skill. On the other hand, students rated in 1978 as "not needing" or "not mastering" the skill can be regarded as having "learned" that skill if they displayed mastery in 1980. Thus, the top two lines can be said to represent "learning" and the third line "retention." For example, 98% of Group I, 98% of Group II, 97% of Group III and 94% of Group IV demonstrated "retention" of this skill. Likewise, percentages of students ranging from 81% to 100% who had not previously mastered this skill had "learned" to capitalize proper nouns correctly by 1980. This table indicates that the program was extremely effective at helping students retain this skill once they had mastered it, and somewhat less effective at initially teaching the same skill.

The areas of strength and weakness were summarized in this way for all skills and the summary was presented to the teachers at a workshop. By examining each skill in a format similar to that shown in Table 1, it was possible for the Highland staff to determine areas where specific emphasis was needed.

Methods and Data Source

The evaluators collected data for four consecutive years. Because of the way the data were collected, it was possible to examine two separate research hypotheses:

1. As the writing program was more fully implemented throughout the school system, the writing skills of the students would improve.

2. The systematic feedback provided to the teachers during the program would enhance the effectiveness of the program.

To test these hypotheses, two kinds of data were available. First a Writing Skills Checklist measured the mastery of specific writing skills (such as capitalization of proper nouns, the use of commas to separate the words in a series, and the use of commas in nonrestrictive clauses). In addition, a Holistic Rating Scale measured such skills as organization, wording, flavor, general merit, and mechanics. The reliability of these instruments was established in a previous study (Delph, Vockell, and Fullenwider, 1981).

Students were randomly selected for analysis in the study in sufficient numbers to make it likely that by the time they reached the sixth grade there would be approximately 100 sixth graders for longitudinal analysis of their progress throughout the program.

Each year during the four years of the study, all of the students throughout the system wrote an essay on a designated topic. These essays were sent to a central location and the targeted students' papers were withdrawn and analyzed by trained

scorers using the two scoring systems described above. These scorers were blind with regard to the exact hypotheses of the study.

Finally, systematic feedback was provided to the teachers after the first and third years of the program, and therefore improved performance based on the usefulness of the feedback would be anticipated on the scores obtained during the second and fourth years of the program. This evaluation of the usefulness of the feedback represents a repeated treatment (ABAB) design.

Results and Conclusions

Chi square analyses (alpha level = .05) compared the proportion of students in each grade level from year to year whose essays required a skill. Likewise, Chi square analyses were performed for each skill to determine whether the proportion of students mastering each skill shifted significantly during consecutive years. Finally, for both the proportion requiring a skill and the proportion mastering each skill, Chi square analyses were performed to compare the performance during the final year to that during the first year of the evaluation. The following paragraphs will state each research question and will focus on the data to answer the question.

Did the program cause an increase in the proportion of students whose essays required each of the specific skills? The results of the Chi square analyses are summarized in Table 2.

These results indicate that out of the possible 100 specific skills (25 skills x 4 grade levels), there were 33 cases where the students showed a significant increase in the usage of a given skill within their essays. There were only three cases of a significant decrease in the percentage of students whose essays required a designated skill. In 44 of the cases, the proportion of students whose essays required a given skill was initially extremely high (above 97%), and so no significant improvement could be expected. Of the remaining 66 cases, therefore, significant increases in usage occurred in half. Since the program was based upon the assumption that students would spontaneously practice skills in their own essays, this increased implementation of skills was an important outcome of the program.

Insert Tables 2 and 3 here.

Did the program cause the students to master specific skills? Table 2 shows that there were 21 cases of significant improvements and only two cases of significant losses. In many cases, the absence of significant improvements was explained by the fact that the students' initial scores were very high or by the fact tht a specific skill was not expected to be mastered until a subsequent grade level. Such results support the effectiveness of the overall program.

Did the program cause improvements in the Holistic ratings, in spelling scores, and in vocabulary scores? These scores were compared using analysis of variance, and the results are

summarized in Tables 5 to 7. Duncan multiple range tests (alpha level = .05) were calculated to examine the differences between scores attained during consecutive years. In addition, Duncan multiple range tests were performed to compare the performance during the final year of the evaluation to that of the first year.

Insert Tables 5 to 7 about here.

Comparing the initial to the final Holistic Ratings, out of a possible 40 cases (10 skills x 4 grade levels) there were 25 cases in which there was a significant improvement and only one case in which there was a significant loss. These improvements occurred more often in mechanics and transcribing skills than in general merit. When an overall "General Merit" score was calculated by combining several scores, the third graders (but none of the others) showed significant improvement in the final year compared to the first year. When "Mechanics and Transcribing Skills" was examined as a single score, all four grades showed significant improvements by the final year. In spelling and vocabulary, there were 5 instances of significant improvement and none of significant loss. These results again support the overall effectiveness of the program.

The systematic feedback component was considered to be effective to the extent that significant improvements appeared when the feedback was introduced and significant decrements appeared when the feedback was withdrawn. Table 4 summarizes the results with regard to specific skills. In 1979 (after feedback

had been provided) there were 35 instances of significant improvement and only 1 of a significant decrement. In 1980 (after feedback had been withheld), there were only 2 instances of significant improvement and 23 of significant loss. In 1981 (after feedback had been reinstated), there were 18 more instances of significant improvement and none of significant loss.

The feedback had no such clearcut impact on the percentage of students using each skill. Table 3 shows a pattern of significant increases in usage during the first two years (regardless of feedback) and significant decrements only during the final year (when feedback was provided). One possible explanation for this is that feedback to encourage teachers to promote the practice of a given skill had a continuing effect, whereas feedback to promote mastery had to be provided more regularly.

The Holistic analysis did not indicate unequivocal support for the usefulness of the feedback procedure. There were 28 instances of significant improvements when the feedback was initially introduced, and 7 instances of a significant loss. When feedback was withdrawn, there were 25 more instances of significant improvement and 5 instances of significant loss. Finally, when feedback was reintroduced, there were no cases of significant gain and 30 cases of significant loss on the holistic ratings.

This varying pattern of results can be partially explained by the nature of the feedback. The most explicit feedback invariably occurred with regard to the specific skills. If students were weak on a specific skill, it was relatively obvious what a teacher had to do. On the other hand, if students were weak on "flavor," it was not equally obvious what a teacher should do to overcome the weakness. It seems likely that when the teachers were left on their own, they focused more on "creative" skills and less on teaching specific "mechanical" skills. After feedback, therefore, the teachers may have shifted their emphasis to specific skills to the detriment of the more "creative" skills. When feedback was not provided, they may have followed a natural proclivity to promote more "creative" skills.

Another possible explanation for the differences in the results between the specific skills and the holistic skills is that the Writing Skills Checklist is based upon specific criteria (mastery versus non-mastery of specific skills) whereas the Holistic Rating Scale automatically involves a comparison to other papers within each year's writing sample. If the raters were (perhaps unconsciously) using such a normative standard rather than an objective standard, it is possible that such a subtle bias would result in the suppression of gains or the false indication of losses when in fact students were making genuine progress with regard to the skills rated on the holistic instrument. If this is the case, the apparent losses on the holistic ratings should be considered an artifact of the measuring process rather than actual losses in ability.

A Model of Writing Skills Development

The results presented in this paper indicate that it is possible to use the students' own writing and teacher feedback about this writing as a basis for developing a successful writing program. The effectiveness of such a program is enhanced when feedback is provided both to the students by the teacher and to the teacher by some outside evaluator. In the present study, this outside evaluation and feedback was provided by university personnel; but it seems plausible that other agents could provide this component with equal effectiveness. The key points are that (1) students are able to direct their activities toward self-improvement when the teacher provides feedback about their ongoing attempts, and (2) teachers are able to provide their feedback and instruction more effectively when feedback is available to direct their ongoing activity.

When such a writing program is carried out without the outside evaluation and feedback component, the interactions of the students and teachers can be described by the model shown in Figure 1. In such a model, the student writes a composition, the teacher analyzes the composition and provides feedback to the student, and the student incorporates this feedback into future compositions. By repeating this process, the student develops successful writing skills.

Insert Figure 1 about here

This model can be altered by adding the outside evaluation and feedback component, as shown in Figure 2. In this model, the student still receives feedback from the teacher, but the nature of the feedback from the teacher is determined not only by the student's writing, but also by feedback from the teacher's supervisors based on an overall analysis of the writing of all the students.

Insert Figure 2 about here

A final alteration of the model can be made by adding a feedback line from the evaluator directly to the teacher, as shown in Figure 3. In this case, the teacher bases instructional decisions not only on an analysis of the student's writing and feedback from the teacher's supervisors, but also on direct feedback from the outside evaluator to the teacher.

Insert Figure 3 about here

The 1978 data in the present study represent an implementation of the model shown in Figure 1. These data indicate that the students achieved many useful goals through the implementation of this teacher-feedback model. However, the 1979 and 1981 data, which followed the implementation of the model shown in Figure 3, indicates that the students could achieve substantially higher levels of competency when the feedback is intensified through the addition of outside evaluators reporting

both to the administrators and to the teachers. Finally, the 1980 data represent an implementation of the model shown in Figure 2, in which the outside evaluators provide only indirect feedback to the teachers. The results discussed throughout this report indicate that all three of the models lead to the acquisition of useful writing skills, but that the intensive model shown in Figure 3 leads to the greatest degree of mastery of writing skills.

The superiority of the Intensive Feedback model (Figure 3) over the minimal feedback model (Figure 1) probably arises because teachers are able to devise more appropriate instruction for students if not only the students' writing but also an impartial assessment of the progress of the strengths and weaknesses of the current writing program was available to help design this instruction. For example, feedback that students were having difficulty with capitalizing proper nouns would alert teachers to look for opportunities to strengthen this skill in their students' writing.

There are likewise several factors which could explain the superiority of the Intensive Feedback model over the intermediate model shown in Figure 2. First of all, it seems likely that since the feedback from the evaluators comes to the teachers only indirectly in Figure 2, it might "lose something in the translation." In addition, it seems likely that bringing in specialists from outside might enhance the quality of the feedback in the eyes of the teachers. Finally, there is an

obvious additive effect; the feedback comes from two sources rather than a single source. The teachers are therefore given additional opportunities to analyze and reflect upon the feedback.

Even if it were possible to have the supervisors and administrators provide all the feedback from the evaluators to the teachers, it might not be cost-effective to do so. Except in large school systems which employ specialists who could routinely perform the data collection and analysis necessary to provide the evaluation and feedback, it would probably require extraordinary effort for the regular supervisory and administrative personnel to become thoroughly familiar with the data in order to give it the most effective presentation to the teachers. On the other hand, it would be equally unrealistic to expect the outside evaluators to become thoroughly familiar with the curriculum and objectives of the school system to such a degree as to be able to integrate the data as effectively as possible into the curriculum. Once the evaluators have collected the data, however, it requires only a minimal additional expenditure to have them present the results in a meaningful manner to both the teachers and the administrators and supervisors. This is probably a very cost-effective way to adapt the feedback as quickly as possible to the needs ot the school system.

Summary and Conclusions

The present study shows that it is possible to help

elementary school students develop effective written expression skills by encouraging them to write and providing them feedback on their performance. Such a program becomes more successful, however, if not only the students but also the teachers receive the benefit of feedback with regard to the performance of the students in the program. The implementation of an Intensive Feedback model which provides direct interactions between student and teacher but also additional objective feedback upon which the teacher can base instructional decisions appears to provide the most suitable environment for students to develop their writing skills by actively engaging in writing.

Educational Importance of the Study

The following conclusions emerge from the study:

1. A writing program based on the assumption that students learn to write effectively by planning, writing, and revising compositions based on their own interests can in fact teach important writing skills.

2. The effectiveness of such a program is substantially increased if systematic feedback is provided to the teachers.

3. In certain cases (for example, having the students use a suitable format), a single presentation of feedback is sufficient to promote lasting changes.

4. In other cases, feedback needs to be provided each year; otherwise skills deteriorate when feedback is not provided. In the present study, for example, this appeared to be the case with regard to the use of commas with nonrestrictive clauses.

5. Finally, in some cases both systematic feedback and training for the teachers seems to be necessary to promote growth in skills. In the present study, this appeared to be the case with regard to handwriting skills and encouraging students to eliminate runons and sentence fragments.

Although this program focused on the use of a systematic feedback procedure to teach writing skills, it seems obvious that the same strategy can be applied to other specific skills areas. For example, it is likely that such a strategy could be applied to a mathematics or science program, to the extent that specific skills can be identified and systematic feedback can be provided in ways similar to those involved in the present study.

Reference

Delph, D., Vockell, E.L., & Fullenwider, A. Developing basic writing competencies in the elementary school: An example of university and school system cooperation. A paper presented at the Conference on Language Arts in

the Elementary School sponsored by the National Council of Teachers of English, Portland, Oregon, April, 1981.

Table 1

New Learning and Retention
(Longitudinal Analysis)

	Group I (Gr 3 in 78 Gr 5 in 80)	Group II (Gr 4 in 78 Gr 6 in 80)	Group III (Gr 5 in 78 Gr 7 in 80)	Group IV (Gr 6 in 78 Gr 8 in 80)
Capitalizises Proper Nouns				
No rating in 78	87	91	91	100
Not mastered in 78	81	100	83	100
Mastered in 78	98	98	97	94

Note: Numbers refer to the percentage mastering the skill at the time of the 1980 evaluation.

Table 2

Non-Longitudinal Analysis of Specific Skills
from Mastery Checklist by Grade Level & Year

	Grade 3	Grade 4	Grade 5	Grade 6
Forms letters correctly				
1978	92.5 (98)	84.4 (100)	91.7 (98)	93.0 (100)
1979	92.1 (99)	85.8 (100)	-63.0 (99)	90.7 (99)
1980	93.2 (99)	*98.8 (99)	*98.8 (99)	97.3 (99)
1981	95.5 (100)	98.7 (83)	98.7 (80)	*100.0 (100)
Size & Alignment				
1978	26.9 (98)	25.7 (100)	45.5 (98)	49.0 (100)
1979	*50.0 (99)	*72.8 (97)	*67.8 (99)	*75.9 (100)
1980	*93.7 (98)	*86.0 (99)	*87.9 (100)	*92.0 (99)
1981	84.7 (100)	*96.8 (83)	*94.8 (80)	91.7 (100)
Spaces letters correctly				
1978	84.9 (98)	56.9 (100)	79.5 (99)	83.0 (100)
1979	-48.8 (99)	*87.3 (100)	76.2 (100)	86.8 (99)
1980	*86.9 (99)	*93.9 (87)	*99.4 (100)	*94.7 (100)
1981	-70,3 (100)	89.9 (83)	94.8 (79)	91.2 (100)
Correct slant				
1978	80.1 (97)	58.4 (99)	73.0 (99)	81.0 (100)
1979	-62.7 (89)	*84.8 (100)	75.5 (100)	83.2 (99)
1980	*97.0 (87)	87.6 (86)	*86.1 (100)	85.1 (100)
1981	77.5 (100)	83.6 (83)	74.4 (80)	87.6 (100)
Capitalizes proper nouns				
1978	57.4 (46)	58.3 (65)	59.0 (50)	72.3 (47)
1979	*84.4 (81)*	*90.3 (89)*	70.4 (37)-	*93.8 (75)*
1980	90.9 (63)-	*98.5 (80)-	*88.7 (87)*	95.3 (93)*
1981	*98.1 (96)*	96.6 (98)*	89.1 (98)*	97.0 (99)*
First word in sentence				
1978	86.9 (99)	81.4 (100)	87.0 (100)	96.0 (100)
1979	*98.2 (99)	*100.0(99)	*96.5 (98)	96.3 (99)
1980	97.4 (98)	-94.5 (99)	97.1 (99)	99.1 (100)
1981	97.3 (100)	*100.0(100)	96.8 (100)	100.0 (100)
Pronoun "I"				
1978	98.6 (97)	98.8 (98)	100.0 (93)	99.0 (98)
1979	100.0 (95)	98.9 (95)	98.5 (90)	100.0 (99)
1980	98.4 (98)*	100.0 (99)*	100.0 (96)	98.2 (97)
1981	100.0 (99)	100.0 (99)	99.4 (99)*	100.0 (100)*

Period--End of Sentence				
1978	81.9 (99)	75.4 (100)	81.1 (99)	91.8 (98)
1979	*96.3 (99)	*99.5 (100)	*91.7 (99)	97.2 (100)
1980	-73.4 (98)	-79.3 (99)	-65.9 (100)	-62.5 (98)
1981	*87.4 (100)	82.2 (100)	*83.9 (100)	*94.7 (100)
Question Mark				
1978	36.4 (10)	54.5 (7)	25.0 (3)	0.0 (4)
1979	57.8 (27)*	*85.7 (14)*	50.0 (7)	*91.7 (11)*
1980	50.0 (29)	-41.8 (41)*	62.7 (43)*	68.6 (45)*
1981	*94.4 (16)-	50.0 (8)-	61.5 (8)-	61.5 (6)-
Comma in series				
1978	58.1 (43)	68.1 (43)	75.0 (55)	88.1 (59)
1979	*79.5 (47)	*86.5 (38)	*87.6 (61)	93.9 (61)
1980	72.3 (24)-	82.5 (24)-	79.1 (39)-	76.1 (59)
1981	87.5 (36)*	87.5 (31)	*92.4 (42)	92.2 (45)-
Comma--Nonrestrictive Clause				
1978	9.0 (46)	9.4 (63)	21.6 (60)	51.5 (66)
1979	*29.3 (45)	*29.1 (72)	*39.7 (82)*	67.2 (54)
1980	-12.8 (81)*	-12.3 (94)*	-14.6 (95)*	-18.4 (100)*
1981	9.6 (85)	13.1 (71)-	20.1 (89)	*38.1 (94)-
Comma--Compound Sentence				
1978	13.8 (50)	25.0 (57)	23.1 (53)	41.5 (53)
1979	20.4 (65)*	*41.2 (67)	*40.0 (78)*	*71.7 (85)*
1980	13.7 (65)	-16.0 (87)*	-21.4 (89)*	-16.4 (96)*
1981	14.1 (70)	19.5 (65)	22.8 (65)	*44.1 (84)-
Comma with Quotations				
1978	41.7 (5)	58.3 (7)	50.0 (3)	50.0 (2)
1979	55.6 (22)*	60.9 (12)	62.5 (5)	77.8 (8)*
1980	-28.0 (52)*	42.2 (54)*	58.2 (71)*	69.6 (61)*
1981	*50.0 (29)-	46.4 (15)-	70.6 (17)-	83.3 (25)-
Exclamation Mark				
1978	96.2 (12)	84.2 (11)	90.9 (9)	83.3 (6)
1979	88.1 (25)*	97.4 (19)*	92.3 (18)*	95.5 (20)*
1980	93.8 (33)	92.3 (39)*	95.9 (42)*	93.8 (42)*
1981	92.3 (23)	96.9 (17)-	94.4 (19)-	97.1 (20)-
Quotation Marks				
1978	53.8 (16)	53.3 (9)	66.7 (5)	50.0 (2)
1979	48.2 (34)*	69.7 (17)*	70.6 (12)*	78.9 (18)*
1980	31.1 (55)*	-49.5 (61)*	65.6 (74)*	69.9 (64)*
1981	42.4 (30)-	48.6 (19)-	66.0 (24)-	73.6 (31)-
Apostrophe with Contractions				
1978	65.8 (51)	67.3 (60)	65.6 (73)	69.9 (73)
1979	*78.1 (63)*	*89.1 (75)*	*88.8 (67)	*84.6 (72)
1980	79.9 (70)	89.4 (80)	84.4 (78)*	87.2 (82)
1981	84.6 (47)-	91.8 (51)-	91.3 (47)-	*95.7 (68)-

Apostrophe with Possessives				
1978	37.0 (12)	38.7 (19)	47.6 (17)	75.0 (12)
1979	40.0 (27)*	43.9 (26)	- 8.0 (17)	57.9 (18)
1980	29.9 (40)*	30.8 (39)*	21.2 (19)	44.1 (30)*
1981	37.5 (36)	*49.0 (27)	*45.1 (26)*	53.8 (32)
Hyphenated Word				
1978	43.8 (7)	25.0 (12)	80.0 (4)	42.9 (14)
1979	66.7 (16)*	51.5 (17)	45.0 (14)*	48.0 (23)
1980	69.2 (7)-	58.3 (7)-	44.4 (16)	62.5 (21)
1981	50.0 (9)	55.0 (10)	70.0 (10)	79.4 (20)
Hyphen--end of line				
1978	33.3 (15)	60.0 (15)	63.2 (15)	86.7 (15)
1979	*92.3 (16)	*84.6 (20)	*92.3 (18)	93.8 (30)*
1980	-64.5 (16)	-58.3 (22)	86.8 (22)	-75.6 (36)
1981	58.8 (15)	75.0 (17)	84.2 (20)	89.6 (28)
Parentheses				
1978	57.1 (3)	66.7 (4)	50.0 (2)	100.0 (4)
1979	88.9 (5)	91.7 (6)	91.7 (8)*	100.0 (12)
1980	50.0 (2)	80.0 (3)	91.7 (14)	100.0 (11)
1981	75.0 (4)	87.5 (4)	81.8 (6)-	90.9 (6)
Underlining				
1978	---- (0)	33.3 (1)	100.0 (1)	---- (0)
1979	85.7 (4)*	100.0 (1)	100.0 (3)	75.0 (4)*
1980	66.7 (2)	100.0 (1)	75.0 (2)	80.0 (4)
1981	25.0 (4)*	100.0 (1)	100.0 (3)	99.4 (1)
Headings correct				
1978	0.0 (100)	0.0 (100)	0.0 (100)	0.0 (100)
1979	*100.0(100)	*100.0(100)	*99.3 (100)	*100.0(100)
1980	99.5 (100)	98.8 (100)	98.3 (100)	100.0 (100)
1981	96.3 (100)	99.4 (100)	98.1 (100)	99.4 (100)
Paragraphing				
1978	31.8 (99)	44.0 (99)	44.7 (100)	45.0 (100)
1979	-16.4 (100)	*56.1 (99)	*93.2 (100)	*94.4 (100)
1980	*81.3 (100)	*93.3 (93)	94.3 (100)	92.9 (99)
1981	84.5 (99)	91.7 (98)	96.8 (99)	94.6 (98)
Fragments (eliminated)				
1978	57.8 (100)	35.4 (100)	54.3 (100)	70.7 (100)
1979	*82.9 (99)	*91.4 (100)	*72.4 (99)	*78.4 (100)
1980	-57.3 (100)	-57.6 (100)	-46.8 (100)	-50.9 (100)
1981	*75.7 (100)	*78.2 (100)	*78.7 (100)	*78.4 (100)

Runons (eliminated)

1978	66.0 (100)	66.1 (100)	63.0 (100)	69.3 (100)
1979	74.4 (99)	*84.1 (99)	*65.8 (99)	75.2 (98)
1980	-33.3 (100)	-38.2 (199)	-28.9 (100)	-31.3 (98)
1981	*51.4 (100)	46.2 (100)	*39.4 (100)	*43.0 (100)

Percentages outside parentheses are percentages of pupils whose compositions required a given skill and who displayed ma tery of that skill.

Numbers in parentheses indicate percentage who wrote compositions requiring a given skill and therefore making it possible to evaluate performance.

* indicates a significant improvement over the immediately previous year.

- indicates a significant decrement compared to the previous year's performance.

A straight underline indicates a significant improvement in the fourth year compared to the first year.

A curved underline indicates a signficant l cs in the fourth year compared to the first year.

All tests of significance are based on Chi square analysis at the .05 alpha level.

Table 3

Increases and Decrements in Proportion of Students Whose Essays Required a Designated Skill. (This table is a summary of Table 2. Numbers indicate the number of asterisks (significant increases) or minus signs (significant decrements) in the usage columns of that table.)

Increases

	Grade 3	Grade 4	Grade 5	Grade 6	Total
1978-79	10	5	6	8	29
1979-80	5	8	7	8	28
1980-81	3	1	2	2	8
1978-81	7	7	11	8	33

Decrements

	Grade 3	Grade 4	Grade 5	Grade 6	Total
1978-79	0	0	1	0	1
1979-80	3	3	1	0	7
1980-81	4	5	5	8	22
1978-81	0	1	1	1	3

Table 4

Increases and Decrements in Percentage of Mastery of Specific Skills. (This table is a summary of Table 2. Numbers indicate the number of scores accompanied by an asterisk (significant increase) or a dagger (significant decrement) in Table 2.)

Increases

	Grade 3	Grade 4	Grade 5	Grade 6	Total
1978-79	9	11	9	6	35
1979-80	0	1	1	0	2
1980-81	6	3	4	5	21
1978-81	6	5	5	5	21

Decrements

	Grade 3	Grade 4	Grade 5	Grade 6	Total
1978-79	0	1	0	0	1
1979-80	5	9	4	5	23
1980-81	0	0	0	0	0
1978-81	0	0	1	1	2

Table 3

Non-Longitudinal Analysis of
General Skills from Rating Sheet

	Grade 3	Grade 4	Grade 5	Grade 6
General Merit				
1978	16.5	17.6	18.8	20.1
1979	17.1	18.9	-16.9	20.9
1980	*22.0	*20.9	*20.4	21.5
1981	-17.9	17.9	-17.4	19.9
Ideas				
1978	5.9	6.2	6.6	6.9
1979	* 6.3	* 6.6	- 6.1	7.2
1980	* 7.3	6.9	* 6.9	7.2
1981	-15.9	- 6.1	- 6.2	6.9
Organization				
1978	5.3	5.5	6.0	6.4
1979	4.9	5.6	- 5.2	6.6
1980	* 7.5	* 7.0	* 6.7	7.2
1981	- 6.4	- 6.0	- 5.8	6.5
Wording				
1978	2.7	2.9	3.1	3.3
1979	2.8	* 3.4	- 2.8	3.4
1980	* 3.6	3.5	* 3.4	3.6
1981	- 2.8	- 2.9	- 2.8	3.2
Flavor				
1978	2.7	3.0	3.2	3.5
1979	* 3.1	* 3.3	- 2.8	3.7
1980	* 3.6	3.5	* 3.4	3.6
1981	- 2.9	- 3.0	- 2.9	3.3
Sentence Structure				
1978	4.9	5.0	5.8	6.2
1979	* 6.4	* 6.9	5.3	6.1
1980	* 7.0	7.2	* 7.0	* 7.6
1981	- 5.9	- 5.7	- 5.5	- 6.1
Usage				
1978	2.8	2.7	3.1	3.2
1979	* 3.4	* 4.1	* 3.4	* 3.7
1980	* 3.9	4.1	* 3.7	* 4.0
1981	3.3	- 3.4	- 3.4	- 3.6

Mechanics & Transcribing Skills				
1978	11.7	12.1	12.8	13.4
1979	*13.6	*16.5	*14.2	*15.7
1980	*16.0	-15.8	*15.2	15.5
1981	-14.4	-14.3	-14.4	15.3
Punctuation				
1978	2.7	2.7	3.0	3.2
1979	* 3.4	* 4.5	* 3.5	* 3.6
1980	3.4	- 3.1	- 3.0	- 3.0
1981	- 3.1	2.9	2.8	3.3
Capitalization				
1978	3.2	3.4	3.4	3.6
1979	* 4.0	* 4.9	* 4.4	* 4.5
1980	* 4.4	- 4.6	4.3	4.5
1981	4.4	- 4.3	4.3	4.5
Spelling				
1978	2.9	3.1	3.4	3.6
1979	* 3.3	* 4.5	* 3.6	* 4.1
1980	* 4.2	4.3	* 4.1	4.2
1981	- 3.9	- 3.9	3.1	4.3
Handwriting				
1978	2.9	2.8	3.0	3.1
1979	2.8	- 2.6	- 2.7	* 3.6
1980	* 4.0	* 3.8	* 3.7	3.8
1981	- 3.2	- 3.2	- 3.3	3.6

* indicates a significant improvement over the immediately previous year.

- indicates a significant decrement compared to the previous year's performance.

A straight underline indicates a significant improvement in the fourth year compared to the first year.

A curved underline indicates a signficant loss in the fourth year compared to the first year.

All tests of significance are based on Chi square analysis at the .05 alpha level.

Table 6

Non-Longitudinal Analysis of
Vocabulary & Spelling Ability

	Grade 3	Grade 4	Grade 5	Grade 6
Vocabulary Words Beyond List				
1978	7.1	8.2	11.2	12.2
1979	*12.8	*13.3	*13.8	11.9
1980	-11.1	-11.2	-11.3	11.6
1981	- 8.8	11.3	11.3	12.9
Spelling Errors from list (per 100 words)				
1978	0.7	0.8	0.6	0.5
1979	* 0.4	0.5	* 0.4	0.2
1980	0.8	0.4	0.4	0.2
1981	0.6	0.8	0.3	0.5
Spelling errors beyond list (per 100 words)				
1978	2.7	2.4	1.9	1.6
1979	2.9	2.2	1.6	0.9
1980	* 1.9	- 1.3	1.2	1.1
1981	1.6	1.9	1.4	1.4

* indicates a significant improvement over the immediately previous year.

- indicates a significant decrement compared to the previous year's performance.

A straight underline indicates a significant improvement in the fourth year compared to the first year.

A curved underline indicates a signficant loss in the fourth year compared to the first year.

All tests of significance are based on Chi square analysis at the .05 alpha level.

Table 7

Increases and Decrements in Holistic Ratings. (This table is a summary of Table 3. Numbers represent the number of asterisks (significant increases) or daggers (significant decrements) in that table.)

Increases

	Grade 3	Grade 4	Grade 5	Grade 6	Total
1978-79	8	9	5	6	28
1979-80	11	2	10	2	25
1980-81	0	0	0	0	0
1978-81	9	6	5	5	25

Decrements

	Grade 3	Grade 4	Grade 5	Grade 6	Total
1978-79	0	1	6	0	7
1979-80	0	3	1	1	5
1980-81	10	9	9	2	30
1978-81	0	0	1	0	1

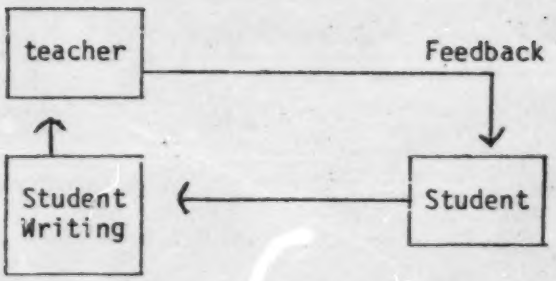

Figure 1

A model showing teacher feed back to the student as the basis for writing-skills improvement of elementary school student.

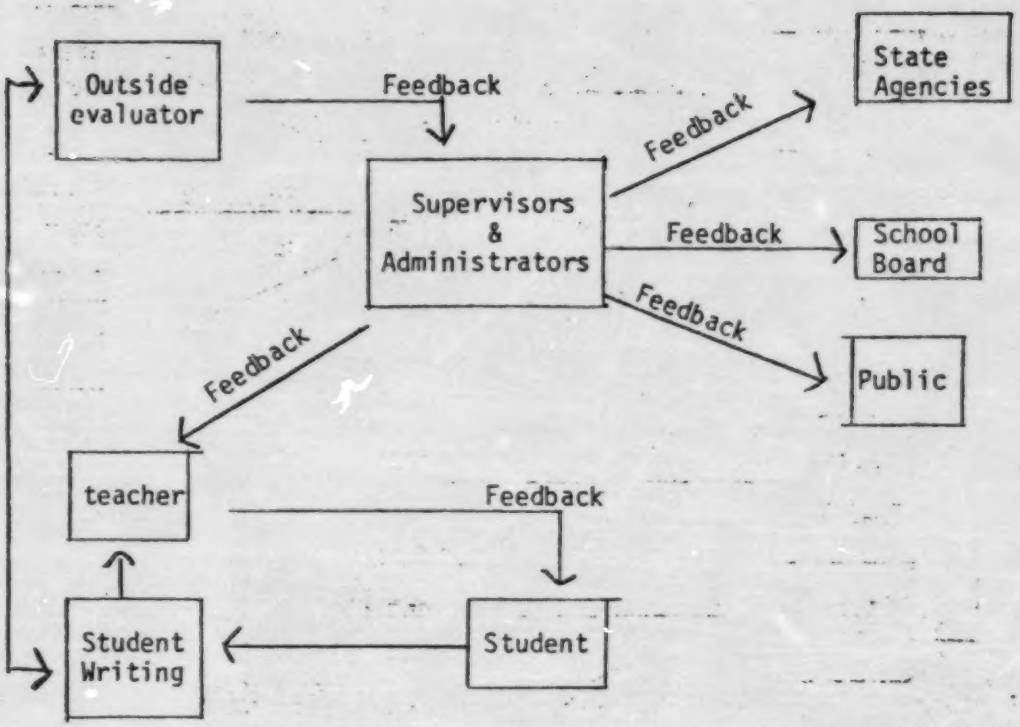

Figure 2

A model showing both direct feedback from the teacher to the student and indirect feedback from outside evaluators to improve the writing skills of elementary school students.

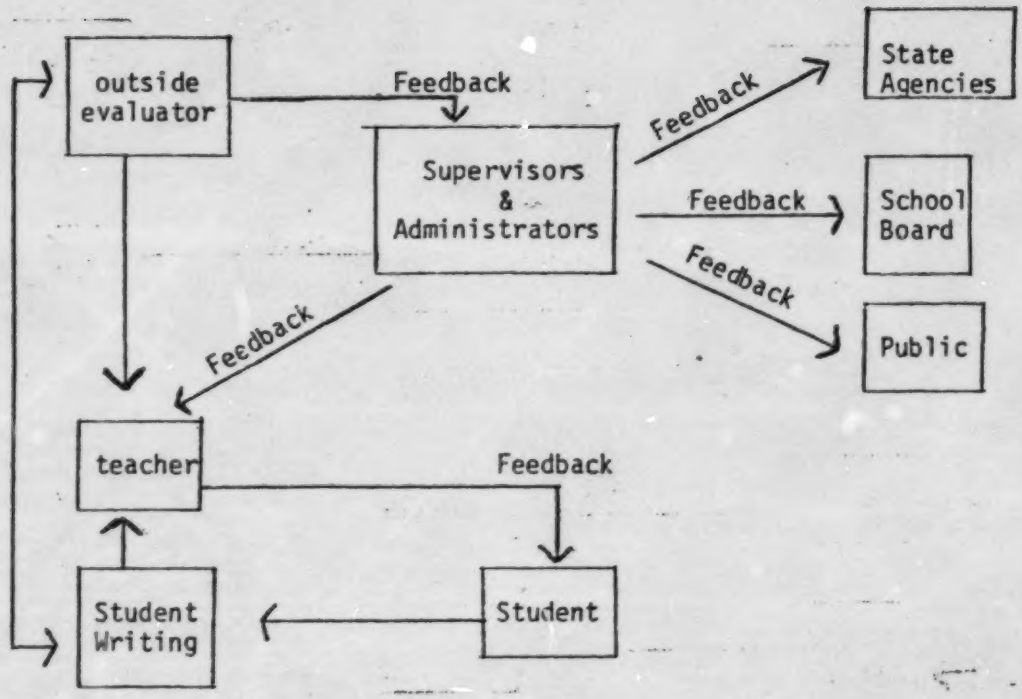

Figure 3

A model showing intensive feedback to stimulate writing-skills improvement.